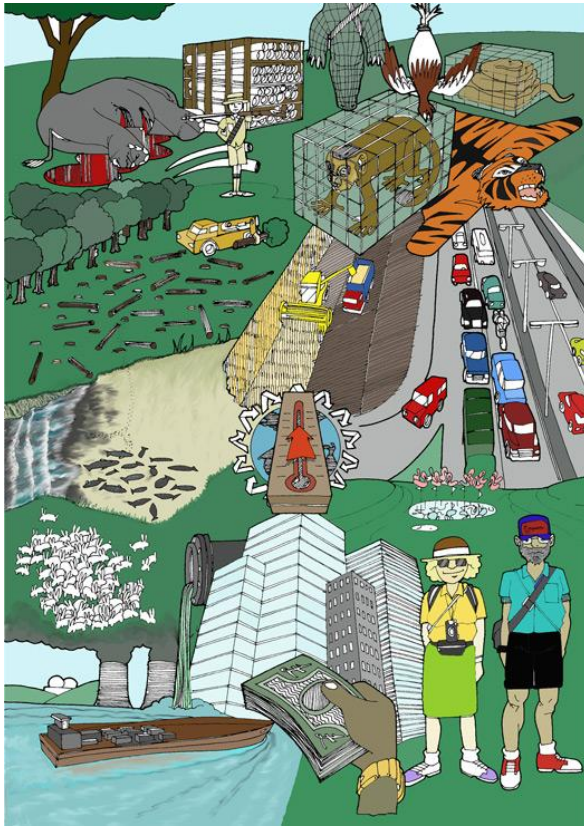
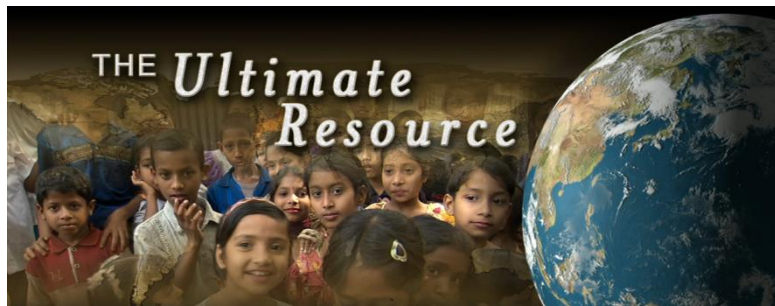


# Ch. 3.2 How Human Influence Ecosystems



- Human make demands on nature by:
- **Land Use**: ways we use land for cities, roads, industry, farming and recreation
- **Resource use**: ways we obtain naturally occurring materials such as soil, wood, water and minerals
  - Also known as **resource exploitation**





- Sustainability
- Ability of an ecosystem to sustain ecological process
- How can First Nations' knowledge improve resource management?
- Traditional ecological knowledge
- Knowledge about climate, resources, biotic, abiotic parts, life cycles gained over centuries

# How can resource exploitation affect ecosystems?

## Habitat loss

- Humans take over natural spaces for development or agriculture
- Habitat are destroyed and can no longer support species that lived there





- Habitat fragmentation
- Agriculture, roads and cities divide ecosystem into smaller isolated fragments
- Plant pollination, seed dispersal, wildlife movement and reproduction are affected



- Deforestation
- Logged or cleared for human use and never replanted
- Reduced # of plants and animals (decrease biodiversity)
- Loss of habitat



- Soil degradation
- Deforestation and land clearance leave land bare so water and wind erosion remove top soil



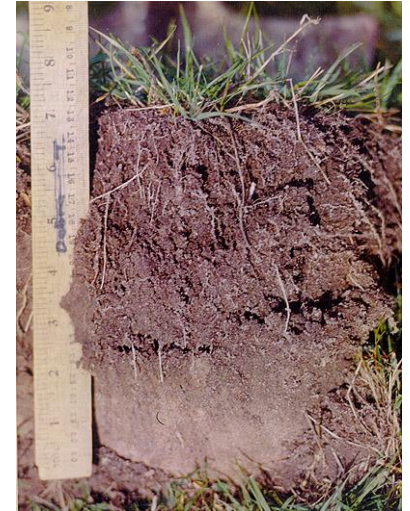
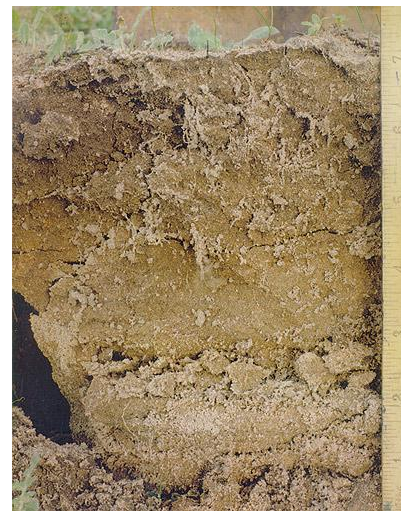
- Organic matter, water and nutrients are removed along with top soil, reducing plant growth





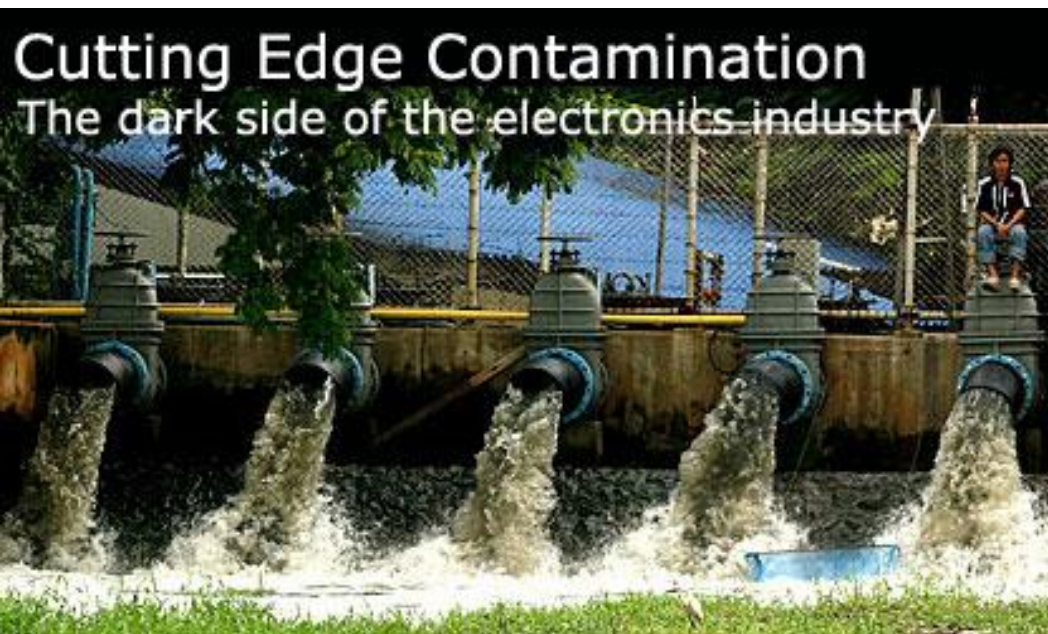
- Soil compaction
- Agriculture farm vehicles and grazing animals **squeeze** soil particles together

- Reduces movement of air, water and soil organisms
- Hinder growth of plants
- Increase run off of fertilizer and pesticides





- Contamination
- By-products of resource exploitation such as mining introduce toxins
- Toxins are introduced into environment in harmful concentrations and kills organisms



- **Overexploitation**
- A resource (like fish or forest) is used or extracted until it is **depleted**



- **Food web** interactions affected
- Organisms become less resistant to disease and less able to adapt to environment change.
- **Extinction** (species die out)

